Run-6

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Today for Discussion (I)

- Activities at PHENIX
  - Recovery from the water damage continues
  - BBC dismantled, checked (thankfully, no problems!) & reassembled and waiting to be reinstalled, will happen this week, laser test around Jan.8th.
    - A new source of dry air for this has not been identified, innovative suggestions are being welcomed…
  - MuTrk team has arrived (today) and will start to turn on electronics systematically and (hopefully) confirm that things are ok there as well
  - Other new detector subsystems being in the process of getting ready to be installed (MPC for example will arrive on Jan.9-16)

  - East Carriage roles in… when?
  - Blue & Pink sheet checkout of the detector (3-4 days) probably in the last week of January

Today's Discussion (II)

What should Run-6 be?

We need some input to make the final planning decisions!

Discussions presently based on assumptions (only!)

Only pp collisions in Run-6

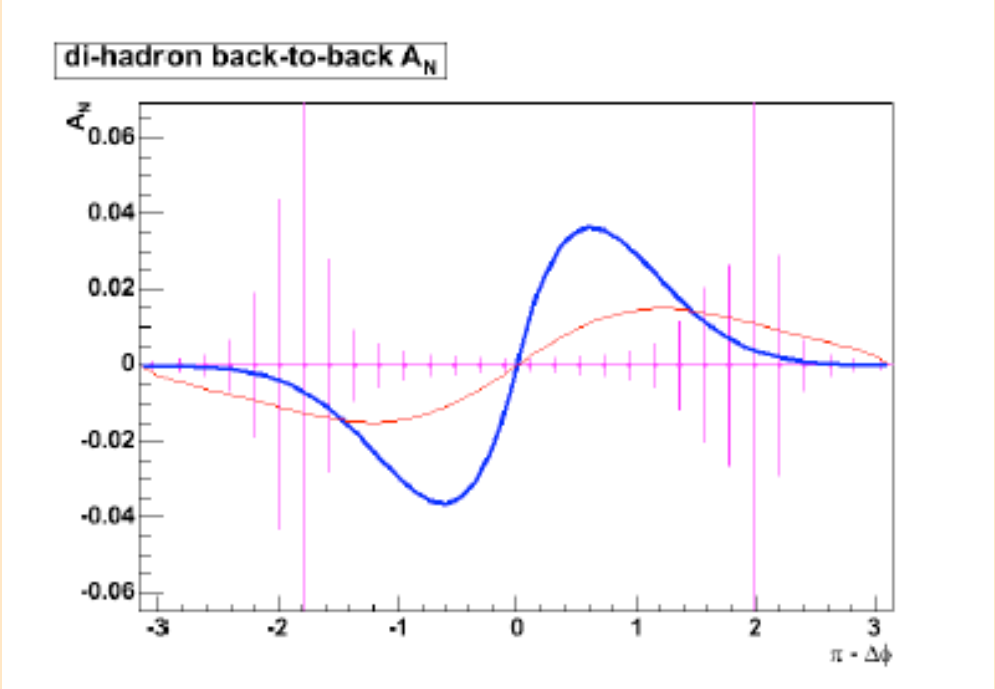
A total of 18 cryo weeks and no more

(18-5.5 = 12.5 wks for Physics)

Options being considered

- 200 GeV CM
  - Transverse (RADIAL at PHENIX) for back-to-back di-pion production asymmetry to *establish or refute* Siver's effect, a *clear evidence for orbital motion* of partons in protons
    - ~3-4 week run should suffice as an exploratory run
    - Yet unexplored physics**: highest priority**
  - Longitudinal double spin asymmetry: improved measurement of A_{LL} in π^0 production and possibly first measurements A_{LL} of direct photon
    - **Especially useful if polarization and luminosity are *sufficiently* high compared to Run-5**
- 500 GeV CM
  - Preparation for **future** runs, we feel **approx. one week** would be sufficient for PHENIX trigger studies and local polarimetry tests
  - Duration should be CAD driven from your point of view
- 62.4 GeV CM
  - Comparison data set for Au-Au at the same CM for R_{AA} measurement
  - Polarized/un-polarized? => Depends on polarization and luminosities
- 22 GeV CM
  - Comparison data set for heavy ion at the same CM from CERN SPS

Run-6: Possible Siver's effect



Assume 7 pb-1 luminosity at 60% polarization
About 4 weeks of run time according to CAD projections

Before we decide....
We need answers for the following questions....

The questions.....

- How long does **radial transverse** operation at PHENIX take to setup? How long will the **other** setup periods be?
- Is there a **preferred sequence** for setup from the CAD side? 22, 63, 200, 500 or a reverse order or some other order?
- If cold snake in AGS requires more commissioning time, could the low energy (spin-wise of low importance) runs be performed earlier while work gets done in AGS?
  - *Would the low energy luminosity life times be enough for this purpose?*
- What **minimum time** does CAD envision they need **for the 500 GeV** study this year?
- The RF dipole has yet to be formally commissioned. Will it be this year? **How long** does that take?